

**Notice of Allowability**

Application No.

09/883,598

Examiner

Kuen S. Lu

Applicant(s)

SUBRAMANIAM ET AL.

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/23/2006.
2. ☒ The allowed claim(s) is/are 1-3, 5-8, 10, 12-24, 27-30 (renumbered to 1-25).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 1/17/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 4/7/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continuation of Attachment(s) 9. Other: Drawings filed 6/18/2001 are accepted..

**DETAILED ACTION**

1. After a thorough search and examination of the present application, and in light of the prior art made of record and Applicant's Amendments and Remarks filed January 23, 2006 and Examiner's Amendment of April 7, 2006, Claims 1-3, 5-8, 10, 12-24 and 27-30 are allowed.

***Information Disclosure Statement***

2. The Information Disclosure Statement filed January 17, 2006 is considered. Examiner has signed PTO-1449 as attached.

***Drawings***

3. The drawings filed June 18, 2001 are accepted.

***Examiner's Amendments***

4. An examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this Examiner's amendment, listed below, was given in a telephone interview with Ms. Chui-Kiu Teresa Wong (Registration: 48,042), on April 7, 2006. A copy of the interview summary is attached.

5. Please amend claims 1, 4-5, 10-12, 16, 21, 25, 27 and 31 as follow:

1. (Currently amended) A method, comprising:  
receiving search criteria;

defining an index field map object to map one or more business components to one or more result fields associated with a search engine, the index field map object including an index field type;

performing a search for data records matching the search criteria using the search engine, the search comprising searching in a plurality of databases,

wherein the search further comprises searching at least one attached document stored in a file system if the index field type indicates the search is to be performed on the file system;

wherein performing the search further comprises passing the received search criteria to a Virtual Business Component (VBC) if the search is to be performed on at least one external database; and

generating search results comprising of the data records matching the received search criteria.

4. (Canceled).

5. (Currently amended) The method of claim ~~4~~1, ~~further comprising~~ wherein performing the search further comprises:

passing the received search criteria from the Virtual Business Component to a search execution business service.

10. (Currently amended) A method, comprising:

receiving a search category and a search keyword entered by a user;

defining an index field map object to map one or more business components to one or more result fields associated with a search engine, the index field map object including an index field type;

searching at least one database and at least one attached document for data records matching the search category and the search keyword using the search engine based on a value of the index field type;

wherein said searching comprises passing the received search category and the search keyword to a Virtual Business Component (VBC) if the user requested the single search to be performed on at least one external database; and

generating search results comprising of the data records matching the search category and the search keyword.

11. (Canceled).

12. (Currently amended) The method of claim 4410, ~~further comprising~~ wherein said searching further comprises:

passing the received search category and the search keyword from the Virtual Business Component to a search execution business service.

16. (Currently amended) A system, comprising:

a user interface to receive search criteria entered by a user;

a search engine associated with one or more result fields, the one or more result fields are mapped to one or more business components by an index field map object, the index field map object including an index field type;

a file system coupled to the search engine to store attached documents; and

a business service to perform a search for data records matching the search criteria using the search engine and to generate search results comprising of the data records matching the received search criteria,

wherein the search comprises searching at least one database and the search further comprises searching at least one attached document in the file system if the index field type indicates the search is to be performed on the file system; and

a Virtual Business Component (VBC) to receive the search criteria from the user interface if the user requested a search on at least one external database.

21. (Currently amended) A system, comprising:

a user interface to receive search criteria entered by a user;

a Virtual Business Component (VBC) to receive the search criteria from the user interface if the user requested a search on at least one external database;

a search engine associated with one or more result fields, the one or more result fields are mapped to one or more business components by an index field map object, the index field map object including an index field type; and

a business service to receive the search criteria from the Virtual Business Component and to search a plurality of databases and at least one attached document

for data records matching the search criteria using the search engine based on a value of the index field type;

wherein the business service sends the search results to a search frame so that the search results can be listed on the user interface.

25. (Canceled).

27. (Currently amended) A machine-readable medium comprising instructions which, when executed by a machine, cause the machine to perform operations comprising:

receiving search criteria entered by a user;

defining an index field map object to map one or more business components to one or more result fields associated with a search engine, the index field map object including an index field type;

performing a search on a plurality of databases and at least one attached document for data records matching the search criteria using the search engine based on a value of the index field type;

wherein performing the search further comprises passing the received search criteria to a Virtual Business Component (VBC) if the search is to be performed on at least one external database; and

generating search results comprising of the data records matching the received search criteria.

31.(Canceled).

***Reason for Allowable***

6. In the Examiner's Office Action for non-Final Rejection of October 20, 2005, 35 U.S.C. 35 U.S.C. § 103, rejections was based on a primary reference of Dessloch et al.: U.S. Patent 6,338,056, "RELATIONAL DATABASE EXTENDER THAT SUPPORTS USER-DEFINED INDEX TYPES AND USER-DEFINED SEARCH", issued January 8, 2002, hereafter "Dessloch", in view of Underwood: U.S. Patent 6,718,535, "SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR AN ACTIVITY FRAMEWORK DESIGN IN AN E-COMMERCE BASED ENVIRONMENT", issued April 6, 2004, hereafter "Underwood" and further in view of Polizzi et al.: U.S. Patent 6,643,661, "METHOD AND APPARATUS FOR IMPLEMENTING SEARCH AND CHANNEL FEATURES IN AN ENTERPRISE-WIDE COMPUTER SYSTEM", issued November 4, 2003, hereafter "Polizzi".

In the Remarks filed on January 23, 2006, the Applicant specifically pointed out that the references of Dessloch, Underwood and Polizzi fail to teach the Applicant's subject matter of **defining an index field map object to map one or more business components to one or more result fields associated with a search engine, the index field map object including an index field type** as claimed in each of independent claims 1, 10, 16, 21 and 27. Applicant further argued that Underwood's business components are isolated from relational database and ordinary skilled would not have been motivated to modify Dessloch to map the business components in



Underwood to the row identifiers in the relational database, and the business components mapping in Underwood is irrelevant to database applications.

After further review of result for the searches conducted over the past, the claims most currently amended as of April 7, 2006, and further consideration of the above remarks, the Examiner is persuaded that the prior art made of record does not teach or suggest the subject matter described as above and the feature of a Virtual Business Component receiving the search criteria from the user interface if the user requested a search on external database(s) as claimed in each of the independent claims 1, 10, 16, 21 and 27.

An update search conducted as described below for the claims 1, 10, 16, 21 and 27 as lastly amended on April 7, 2006 by an Examiner's Amendment for the subject Application filed on June 18, 2001, is hereby considered and accepted.

A search for the prior arts on EAST database has been recently conducted to further extend and update the scope the searches conducted over the past on domains (EAST, NPL-ACM, Google, NPL-IEEE). The prior arts searched and investigated in domains (EAST, NPL-ACM, Google, NPL-IEEE) do not fairly teach or suggest the teaching of the combined elements as claimed in the independent claims 1, 10, 16, 21 and 27.

The dependent Claims in the groups (2-3, 5-8), (12-15), (17-20), (22-24) and (28-30), depending on claims 1, 10, 16, 21 and 27, respectively, also distinct from the prior art for the same reason.


7. Any comments considered necessary by Applicants must be submitted no later than


the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll free).

Kuen S. Lu,   
Patent Examiner,  
April 8, 2006

  
K. S. LU  
PATENT EXAMINER